

WHAT IS CLAIMED IS:

1. A dietary supplement comprising a pharmaceutically acceptable excipient, and vegetable protein bound phenolics.

2. A dietary supplement in accordance with Claim 1 wherein the vegetable protein bound phenolics are from a source selected from the group consisting of buckwheat, sunflower seeds, soy beans, hops, mustard seeds, cottonseeds, peanuts, safflower seeds, rape seed and flax seeds.

3. A dietary supplement in accordance with Claim 1 which is in the form of a tablet, capsule or soft-gel capsule.

4. A dietary supplement in accordance with Claim 3 wherein the vegetable protein bound phenolics are from a source selected from the group consisting of buckwheat, sunflower seeds, soy beans, hops, mustard seeds, cottonseeds, peanuts, safflower seeds, rape seed and flax seeds.

5. A dietary supplement in accordance with Claim 1 comprising approximately 25 to 95 per cent by weight of the vegetable protein bound phenolics.

6. A dietary supplement in accordance with Claim 5 wherein the vegetable protein bound phenolics are from a source selected from the group consisting of buckwheat,

1 sunflower seeds, soy beans, hops, mustard seeds, cottonseeds, peanuts, safflower seeds,
2 rape seed and flax seeds.

3 7. A dietary supplement in accordance with Claim 1 wherein each unit dose of the
4 supplement has an antioxidant capacity of 2,500 to 200,000 micromoles of trolox
5 equivalent per unit dose of the supplement.

6 8. A dietary supplement in accordance with Claim 7 wherein each unit dose of the
7 supplement has an antioxidant capacity of 20,00 to 100,000 micromoles of trolox
8 equivalent per unit dose of the supplement.

9 9. A dietary supplement in accordance with Claim 8 which is in the form of a
10 tablet, capsule or soft-gel capsule.

11 10. A dietary supplement in accordance with Claim 9 wherein the vegetable
12 protein bound phenolics are from a source selected from the group consisting of
13 buckwheat, sunflower seeds, soy beans, hops, mustard seeds, cottonseeds, peanuts,
14 safflower seeds, rape seed and flax seeds.

15 11. A dietary supplement comprising a pharmaceutically acceptable excipient, and
16 vegetable protein bound phenolics wherein said dietary supplement has been prepared by
17 a process comprising the steps of:

1 adding alkali to an admixture of vegetable flour with water where said flour
2 comprises naturally occurring protein and naturally occurring phenolics until said
3 aqueous admixture is of alkaline pH;

4 allowing the naturally occurring phenolics to oxidize and covalently attach to the
5 protein;

6 removing solids from said admixture of alkaline pH;

7 adding acid to the admixture until said admixture is of neutral or acidic pH thereby
8 causing vegetable protein bound phenolics to precipitate as a solid;

9 isolating the solid precipitate, and

10 admixing the vegetable protein bound phenolics constituting a solid precipitate
11 with a pharmaceutically acceptable excipient.

12 12. A dietary supplement in accordance with Claim 11 having been prepared by
13 the process additionally comprising the step of drying the solid precipitate before the step
14 of admixing it with a pharmaceutically acceptable excipient.

15 13. A dietary supplement in accordance with Claim 11 which is in the form of a
16 tablet, capsule or soft-gel capsule.

1 14. A dietary supplement in accordance with Claim 11 comprising approximately
2 25 to 95 per cent by weight of the vegetable protein bound phenolics.

3 15. A dietary supplement in accordance with Claim 11 wherein each unit dose of
4 the supplement has an antioxidant capacity of 2,500 to 200,000 micromoles of trolox
5 equivalent per unit dose of the supplement.

6 16. A dietary supplement in accordance with Claim 11 which is in the form of a
7 tablet, capsule or soft-gel capsule.

8 17. A dietary supplement in accordance with Claim 11 wherein the vegetable
9 protein bound phenolics are from a source selected from the group consisting of
10 buckwheat, sunflower seeds, soy beans, hops, mustard seeds, cottonseeds, peanuts,
11 safflower seeds, rape seed and flax seeds.

12 18. A dietary supplement in accordance with Claim 11 having been prepared by
13 the process additionally comprising the step of adding exogenous phenolics of the type
14 naturally occurring in plants to the admixture of vegetable flour with water.

15 19. A dietary supplement in accordance with Claim 18 wherein exogenous
16 phenolics are added to the admixture in a ratio of approximately 0.25 to 5.0 weight units
17 of exogenous phenolics to 100 weight units of vegetable flour.

1 **20.** A dietary supplement in accordance with Claim 19 wherein exogenous
2 phenolics are added to the admixture in a ratio of approximately 0.5 to 2.0 weight units of
3 exogenous phenolics to 100 weight units of vegetable flour.

4 **21.** A dietary supplement in accordance with Claim 18 wherein exogenous
5 phenolics are selected from a group consisting of phenolic acids, catechins, flavones,
6 anthocyanidins and isoflavones.

7 **22.** A dietary supplement in accordance with Claim 21 wherein exogenous
8 phenolics comprise quercetin.

9 **23.** A dietary supplement in accordance with Claim 18 wherein each unit dose of
10 the dietary supplement has an antioxidant capacity of 12,500 to 2,000,000 micromoles of
11 trolox equivalent per unit dose of the supplement.

12 **24.** A food product comprising vegetable protein bound phenolics wherein said
13 food product has an antioxidant capacity of 500 to 20,000 micromoles of trolox
14 equivalent per gram of the food product, said phenolics being from a source selected from
15 the group consisting of buckwheat, sunflower seeds, soy beans, hops, mustard seeds,
16 cottonseeds, peanuts, safflower seeds, rape seed and flax seeds.

17 **25.** A food product in accordance with Claim 24 in the form of edible bars or
18 liquid shakes.

1 26. A food product comprising vegetable protein bound phenolics wherein said
2 food product has an antioxidant capacity of 500 to 20,000 micromoles of trolox
3 equivalent per gram of the food product, said food product having been prepared by a
4 process comprising the steps of:

5 adding alkali to an admixture of vegetable flour with water where said flour
6 comprises naturally occurring protein and naturally occurring phenolics until said
7 aqueous admixture is of alkaline pH;

8 allowing the naturally occurring phenolics to oxidize and covalently attach to the
9 protein;

10 removing solids from said admixture of alkaline pH;

11 adding acid to the admixture until said admixture is of neutral or acidic pH thereby
12 causing vegetable protein bound phenolics to precipitate as a solid;

13 isolating the solid precipitate, and

14 admixing the vegetable protein bound phenolics constituting a solid precipitate
15 with a nutritional product having caloric value.

16 27. A food product in accordance with Claim 26 having been prepared by the
17 process additionally comprising the step of drying the solid precipitate before the step of
18 admixing it with a pharmaceutically acceptable excipient.

1 **28.** A food product in accordance with Claim 26 which is in the form of edible
2 bars or liquid shakes.

3 **29.** A food product in accordance with Claim 26 having been prepared by the
4 process additionally comprising the step of adding exogenous phenolics to the admixture
5 of vegetable flour with water.

6 **30.** A food product in accordance with Claim 29 wherein exogenous phenolics are
7 added to the admixture in a ratio of approximately 0.25 to 5 weight units of exogenous
8 phenolics to 100 weight units of vegetable flour.

9 **31.** A food product in accordance with Claim 30 wherein exogenous phenolics are
10 added to the admixture in a ratio of approximately 0.5 to 2.0 weight units of exogenous
11 phenolics to 100 weight units of vegetable flour.

12 **32.** A process for preparing a dietary supplement comprising a pharmaceutically
13 acceptable excipient, and vegetable protein bound phenolics, comprising the steps of:

14 adding alkali to an admixture of vegetable flour with water where said flour
15 comprises naturally occurring protein and naturally occurring phenolics until said
16 aqueous admixture is of alkaline pH;

17 allowing the naturally occurring phenolics to oxidize and covalently attach to the
18 protein;

1 removing solids from said admixture of alkaline pH;

2 adding acid to the admixture until said admixture is of neutral or acidic pH thereby
3 causing vegetable protein bound phenolics to precipitate as a solid;

4 isolating the solid precipitate, and

5 admixing the vegetable protein bound phenolics constituting a solid precipitate
6 with a pharmaceutically acceptable excipient.

7 **33.** A process in accordance with Claim 32 wherein the vegetable flour is from a
8 source selected from a group consisting of buckwheat, sunflower seeds, soy beans, hops,
9 mustard seeds, cottonseeds, peanuts, safflower seeds, rape seed and flax seeds.

10 **34.** A process in accordance with Claim 32 additionally comprising the step of
11 drying the solid precipitate before the step of admixing it with a pharmaceutically
12 acceptable excipient.

13 **35.** A process in accordance with Claim 32 wherein the dietary supplement
14 comprises approximately 25 to 95 per cent by weight of the vegetable protein bound
15 phenolics.

16 **36.** A process in accordance with Claim 32 additional comprising the step of
17 making unit doses of said dietary supplement wherein each unit dose of the supplement

1 has an antioxidant capacity of 2,500 to 200,000 micromoles of trolox equivalent per unit
2 dose of the supplement.

3 37. A process in accordance with Claim 32 process additionally comprising the
4 step of adding exogenous phenolics to the admixture of vegetable flour with water.

5 38. A process in accordance with Claim 37 wherein exogenous phenolics are
6 added to the admixture in a ratio of approximately 0.25 to 5 weight units of exogenous
7 phenolics to 100 weight units of vegetable flour.

8 39. A process in accordance with Claim 38 wherein exogenous phenolics are
9 added to the admixture in a ratio of approximately 0.5 to 2.0 weight units of exogenous
10 phenolics to 100 weight units of vegetable flour.

11 40. A process for preparing a food product comprising a pharmaceutically
12 acceptable excipient, and vegetable protein bound phenolics, wherein said food product
13 has an antioxidant capacity of 500 to 20,000 micromoles of trolox equivalent per gram of
14 the food product, the process comprising the steps of:

15 adding alkali to an admixture of vegetable flour with water where said flour
16 comprises naturally occurring protein and naturally occurring phenolics until said
17 aqueous admixture is of alkaline pH;

1 allowing the naturally occurring phenolics to oxidize and covalently attach to the
2 protein;

3 removing solids from said admixture of alkaline pH;

4 adding acid to the admixture until said admixture is of neutral or acidic pH thereby
5 causing vegetable protein bound phenolics to precipitate as a solid;

6 isolating the solid precipitate, and

7 admixing the vegetable protein bound phenolics constituting a solid precipitate
8 with a nutritional product.

9 41. A process in accordance with Claim 40 additionally comprising the step of
10 drying the solid precipitate before the step of admixing it with a nutritional product.

11 42. A process accordance with Claim 40 wherein the food product in the form of
12 edible bars or liquid shakes.

13 43. A process in accordance with Claim 40 additionally comprising the step of
14 adding exogenous phenolics to the admixture of vegetable flour with water.

15 44. A process in accordance with Claim 40 wherein exogenous phenolics are
16 added to the admixture in a ratio of approximately 0.25 to 5.0 weight units of exogenous
17 phenolics to 100 weight units of vegetable flour.

